CLAIMS

The current claims for this application are listed below.

1. (Currently amended) A motion estimation method comprising:

identifying, by a computer, one or more pixels in a first frame of a multi-view video sequence;

constraining a search range associated with a second frame of the multi-view video sequence to a first area vertically centered on ~~relative to a position of~~ an epipolar line in the second frame, wherein the epipolar line corresponds to the one or more pixels in the first frame, the first area is defined by a having a height specified by a first correlation between efficient compression and semantic accuracy ~~specified~~ received by the computer from [[by]] a user, wherein the height increases if the first correlation is weighted toward efficient compression and the height decreases if the first correlation is weighted toward semantic accuracy, and the semantic accuracy relies on use of geometric configurations of cameras capturing the multi-view video sequence, and wherein ~~constraining~~ the search range is further constrained using a disparity vector computed for the one or more pixels ~~comprises finding a position of an initial seed on the epipolar line using a disparity vector~~ and wherein the constrained search range is repositioned relative to the epipolar line using the disparity vector in addition constraining the height using the first correlation; ~~centered around the initial seed~~

searching the second frame within the constrained search range for a match of the one or more pixels identified in the first frame for subsequent use in

computing a ~~motion~~ difference vector for the one or more pixels, the ~~motion~~ difference vector to be transmitted as part of a compressed representation of the first frame;

receiving a second correlation between efficient compression and semantic accuracy from the user; and

searching a third frame within a search range constrained by a second correlation between efficient compression and semantic accuracy, the second correlation specified by the user and a value of the second correlation is different from a value of the first correlation.

2. (Previously Presented) The method of claim 1 wherein the position of the epipolar line depends on the geometric configurations of the cameras.

3. (Original) The method of claim 1 wherein the one or more pixels in the first frame represent a block.

4. (Previously Presented) The method of claim 1 further comprising:

computing the epipolar line in the second frame.

5. (Original) The method of claim 4 wherein the epipolar line is computed using a fundamental matrix.

6. (Currently amended) The method of claim 1 wherein constraining the search range comprises:

determining parameters of a window covering [[the]] an initial seed and the epipolar line based on the first correlation between efficient compression and semantic accuracy.

7. (Canceled)

8. (Canceled)

9. (Currently amended) The method of claim [[8]] 1 further comprising:

communicating to a user a user interface facilitating user input of the first correlation between efficient compression and semantic accuracy.

10. (Previously Presented) The method of claim 9 wherein the user interface provides a slider to enable the user to specify the first correlation between efficient compression and semantic accuracy.

11. (Previously Presented) The method of claim 9 wherein the user interface allows the user to modify a previously specified correlation between efficient compression and semantic accuracy at any time.

12. (Currently amended) A computer readable memory medium that provides computer program instructions, which when executed on a computer processor cause the processor to perform operations comprising:

identifying one or more pixels in a first frame of a multi-view video sequence;

constraining a search range associated with a second frame of the multi-view video sequence to a first area vertically centered on ~~relative to a position of~~ an epipolar line in the second frame, wherein the epipolar line corresponds to the one or more pixels in the first frame, the first area is defined by a having a height specified by a first correlation between efficient compression and semantic accuracy ~~specified~~ received from [[by]] a user, wherein the height increases if the first correlation is weighted toward efficient compression and the height decreases if the first correlation is weighted toward semantic accuracy, and the semantic accuracy relies on use of geometric configurations of cameras capturing the multi-view video sequence, and wherein ~~constraining~~ the search range is further constrained using a disparity vector computed for the one or more pixels ~~comprises finding a position of an initial seed on the epipolar line using a disparity vector~~ and wherein the constrained search range is repositioned relative to the epipolar line using the disparity vector in addition to constraining the height using the first correlation; ~~centered around the initial seed~~

searching the second frame within the constrained search range for a match of the one or more pixels identified in the first frame for subsequent use in

computing a ~~motion~~ difference vector for the one or more pixels, the ~~motion~~ difference vector to be transmitted as part of a compressed representation of the first frame;

receiving a second correlation between efficient compression and semantic accuracy from the user; and

searching a third frame within a search range constrained by a second correlation between efficient compression and semantic accuracy, the second correlation specified by the user and a value of the second correlation is different from a value of the first correlation.

13. (Previously Presented) The computer readable memory medium of claim 12 wherein the position of the epipolar line depends on the geometric configurations of the cameras.

14. (Previously Presented) The computer readable memory medium of claim 12 wherein the one or more pixels in the first frame represent a block.

15. (Previously Presented) The computer readable memory medium of claim 12 wherein the operations further comprise:

computing the epipolar line in the second frame.

16. (Previously Presented) The computer readable memory medium of claim 15 wherein the epipolar line is computed using a fundamental matrix.

17. (Currently amended) The computer readable memory medium of claim 12 wherein constraining the search range comprises:

determining parameters of a window covering [[the]] an initial seed and the epipolar line based on the first correlation between efficient compression and semantic accuracy.

18. (Canceled)

19. (Previously Presented) The computer readable memory medium of claim 12 wherein the operations further comprise:

communicating to a user a user interface facilitating user input of the first correlation between efficient compression and semantic accuracy.

20. (Currently amended) A computerized system comprising:

a memory; and

at least one processor coupled to the memory, the at least one processor executing a set of instructions which cause the at least one processor to

identify one or more pixels in a first frame of a multi-view video sequence,

constrain a search range associated with a second frame of the multi-view video sequence to a first area vertically centered on ~~proximate to a position of~~ an epipolar line in the second frame, wherein the epipolar line corresponds to the one or more pixels in the first frame, the first area is defined by a having a height specified by a first correlation between efficient compression and semantic accuracy ~~specified by~~ received from a user, wherein the height increases if the first correlation is weighted toward efficient compression and the height decreases if the first correlation is weighted toward semantic accuracy, and the semantic accuracy relies on use of geometric configurations of cameras capturing the multi-view video sequence, and wherein ~~constraining~~ the search range is further constrained using a disparity vector computed for the one or more pixels ~~comprises finding a position of an initial seed on the epipolar line using a disparity vector~~ and wherein the constrained search range is repositioned relative to the epipolar line using the disparity vector in addition to constraining the height using the first correlation, ~~centered around the initial seed~~

search the second frame within the constrained search range for a match of the one or more pixels identified in the first frame for subsequent use in computing a ~~motion~~ difference vector for the one or more pixels, the difference ~~motion~~ vector to be transmitted as part of a compressed representation of the first frame,

receive a second correlation between efficient and semantic accuracy from the user, and

search a third frame within a search range constrained by a second correlation between efficient compression and semantic accuracy, the second correlation specified by the user and the second correlation different from the first correlation.

21. (Previously Presented) The system of claim 20 wherein the position of the epipolar line depends on the geometric configurations of the cameras.

22. (Original) The system of claim 20 wherein the one or more pixels in the first frame represent a block.

23. (Currently amended) The system of claim 20 wherein the processor is to constrain the search range by determining parameters of a window covering [[the]] an initial seed and the epipolar line based on the first correlation between efficient compression and semantic accuracy.

24. (Canceled)

25. (Previously Presented) The system of claim 20 wherein the processor is further to communicate to the user a user interface facilitating user input of the first correlation between efficient compression and semantic accuracy.

26. (Currently amended) A motion estimation apparatus comprising:

a block identifier to identify one or more pixels in a first frame of a multi-view video sequence;

a search range determinator to constrain a search range associated with a second frame of the multi-view video sequence to a first area vertically centered on ~~proximate to a position of~~ an epipolar line in the second frame, wherein the epipolar line corresponds to the one or more pixels in the first frame, the first area is defined by a having a height specified by a first correlation between efficient compression and semantic accuracy ~~specified by~~ received from a user, wherein the height increases if the first correlation is weighted toward efficient compression and the height decreases if the first correlation is weighted toward semantic accuracy, and the semantic accuracy relies on use of geometric configurations of cameras capturing the multi-view video sequence, wherein the search range determinator is to further constrain the search range using a disparity vector computed for the one or more pixels ~~by finding a position of an initial seed on the epipolar line using a disparity vector~~ and wherein the constrained search range is repositioned relative to the epipolar line using the disparity vector in addition to constraining the height using the first correlation; ~~centered around the initial seed;~~

a searcher to search the second image within the constrained search range for a match of the one or more pixels identified in the first frame for use by a ~~motion~~ difference vector calculator to compute a ~~motion~~ difference vector for the

one or more pixels, the ~~motion~~ difference vector to be transmitted as part of a compressed representation of the first frame, and to search a third image within a search range constrained by a second correlation between efficient compression and semantic accuracy, the second correlation received from ~~specified by~~ the user and different from the first correlation.

27. (Previously Presented) The apparatus of claim 26 wherein the position of the epipolar line depends on the geometric configurations of the cameras.

28. (Original) The apparatus of claim 26 wherein the one or more pixels in the first frame represent a block.

29. (Previously Presented) The apparatus of claim 26 wherein the search range determinator is further to compute the epipolar line in the second frame.

30. (Currently amended) The apparatus of claim 26 wherein the search range determinator is to constrain the search range by determining parameters of a window covering [[the]] an initial seed and the epipolar line based on the first correlation between efficient compression and semantic accuracy.

31. (Previously Presented) The apparatus of claim 26 wherein the search range determinator is further to communicate to the user a user interface facilitating

user input of the first correlation between efficient compression and semantic accuracy.